

GLOSSARY

These are many of the common words that have definitions in the springmaking field. The definitions are my own (caveat) and are admittedly not complete. This is not a dictionary -- it's just another tool you can use to do a better job.



- Definitions of words
- Pictures
 - Compression spring
 - Extension spring
 - Torsion spring

Active coil

A coil of wire which contributes to the motive force of a spring. In extension and torsion springs, all the coils are active coils. In compression springs, only the coils which show daylight between them are active coils.

Arbor

A bar or pipe around which wire is wound to form a spring.

Back gear

A mechanism in a lathe that allows the chuck to turn very slowly.

Beryllium copper (wire)

An exotic material that can be made into springs.

Bundle

A roll or coil of wire as it is shipped from the manufacturer.

Cast

The curvature in wire that results from its being bundled into coils at the factory.

Chrome Silicon (wire)

An alloy of steel, stronger than Oil Tempered wire.

Chrome Vanadium (wire)

An alloy of steel, stronger than Oil Tempered wire.

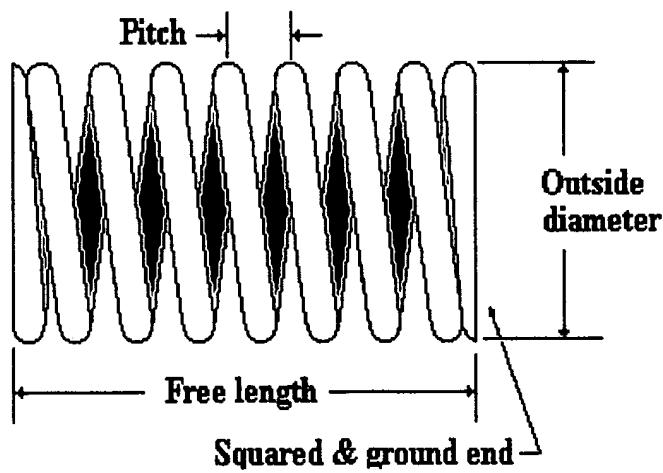
Closed and ground end	Referring to the end of a compression spring where the wire forms one dead coil and is ground square.
Closed end	Referring to the end of a compression spring where the wire forms one dead coil and is not ground square.
Coil	1) (noun) The wire of a spring going completely around once (see <i>active coil, dead coil</i>). 2) (noun) A bundle of wire as it is shipped from the factory. 3) (verb) To form (wire) into a spring.
Compression	Making smaller.
Compression spring	A spring which derives its usefulness because it pushes against a load which makes it smaller.
Dead coil	A coil of wire which does not contribute to the motive force of a spring. In extension and torsion springs, there are no dead coils. In compression springs, the coils at each end that lay against each other are dead coils: all the rest are active coils.
Double torsion	A form of torsion spring that has two coils; one left-handed and one right-handed, connected by a central tongue.
Extension	Making longer.
Extension spring	A spring which derives its usefulness because it pulls against a load which makes it longer.
Free length	The length of a spring with no load applied.
Grinding stage	A flat (usually) steel platform used to ensure that the ends of compression springs orient correctly to a grinding wheel.



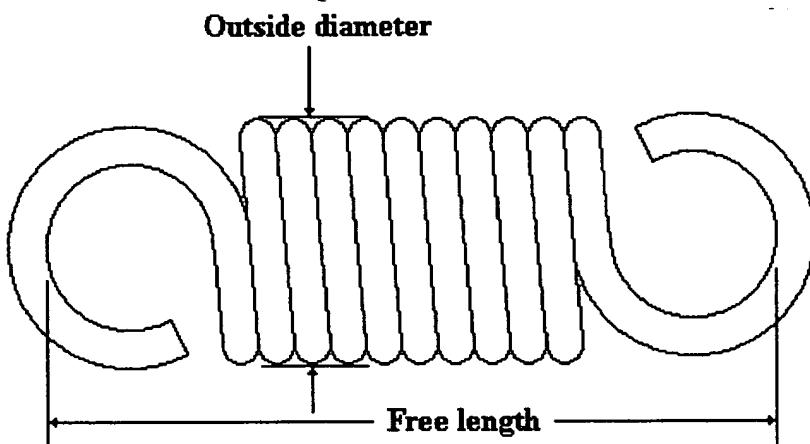
Heat treat (ing)	1) The process of tempering metal. 2) (colloquially) The process of stress relief.
Lathe	A machine which derives its usefulness by rotating stock against which tooling may be brought to bear. Springs are often wound on a lathe.
Lead screw	A mechanism in a lathe that allows the tool post to move from side to side at a precise rate.
Mandrel	An arbor.
Music wire	A high-carbon steel alloy used in making springs.
Open end	Referring to the end of a compression spring where the pitch of the spring extends all the way to the end of the wire, and does not form any dead coils.
OT (Oil Tempered wire)	A lower-carbon steel alloy used in making springs.
Passivate (-ation)	The process of removing chemical coatings from stainless steel by immersion in an acid bath.
Phosphor bronze (wire)	An exotic alloy sometimes used in making springs.
Pigtail	A form taken by tie wire when used to secure a bundle of heavy spring wire.
Pitch	The distance, center to center, between two active coils of a compression spring.
Spring [dia]	A helically formed piece of (usually) wire which derives its usefulness because it tries to regain its original shape when subjected to a load. See <i>Compression Spring, Extension Spring,</i>

	<i>Torsion Spring.</i>
Stainless Steel (wire)	An alloy used in making springs that will not rust. The most common stainless steels are called 302 and 17-7.
Stress	Misalignment of the molecules in wire due to bending.
Titanium	A strong, lightweight metal sometimes used in making springs.
Tool post	The part of a lathe that allows tooling to be mounted and used on stock.
Torsion	Twisting.
Torsion spring	A spring which derives its usefulness by trying to return to its original shape when subjected to a load traveling around its axis.
Variable pitch	A form of compression spring that has more than one pitch.
Wind	To coil (a spring).
Wire	Metal, usually round and solid in section, used in making springs.

Compression Spring:



Extension Spring



Torsion Spring

